REMARKS

I. Introduction

Claims 23 to 48 are pending in the present application. Claims 23 to 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yakura et al., U.S. Patent No. 5,576,224 ("Yakura") in view of Blayo et al., U.S. Patent No. 5,739,909 ("Blayo"). Claims 38 to 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blayo in view of Yakura, and in further view of Curran, U.S. Patent No. 5,126,284 ("Curran"). Claims 43 to 48 are allowed.

II. Indication of Allowed Claims

Claims 43 to 48 were allowed as indicated in the previous Office Action Summary (Paper No. 16) but are not indicated as such in the current Office Action Summary (Paper No. 11052003). Applicants respectfully request that the current Office Action Summary be updated to reflect the allowed claims.

III. The rejection under 35 U.S.C. § 103(a) with respect to Claims 23 to 37 should be withdrawn

Claims 23 to 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yakura in view of Blayo. It is respectfully submitted that claims 23 to 37 are not rendered unpatentable for at least the following reasons.

Claim 23, as amended, relates to a device that includes at least one passive electronic component arranged on a structured surface layer of a sacrificial layer and in the shape of a coil, which is configured to determine a physical measured quantity that is proportional to an extent of an at least locally etched lateral undercut of the structured surface layer.

Yakura purportedly concerns a method and structure for sensing temperature data of a batch or group of silicon wafers undergoing fabrication, in which a monitor wafer made from the same material and having the same configuration as the batch of silicon wafers is additionally configured with a closed loop or spiral segment on its surface so that when included with the batch of wafers being processed, one or more coils of a transformer structure may be brought into operative relation with the closed loop or spiral segment structure in order to periodically measure the temperature of the monitor wafer. (See Yakura, Abstract; col. 1, lines 9 to 14; col. 3, lines 28 to 49). Due to the similarity between the monitor element and the silicon wafers being processed, the temperature measurement taken

from the monitor device is considered to be also accurate for the silicon wafers being processed. (See Yakura, col. 2, lines 22 to 25). In this regard, the closed loop or spiral segment disclosed in Yakura does not determine **a physical measured quantity that is proportional to the extent of an at least locally etched lateral undercut of a structured surface layer**, as recited in claim 23. Indeed, the Final Office Action does not assert that Yakura discloses such limitations in regards to a physical measured quantity. Instead, the Final Office Action asserts on page 4 that: the closed loop 44 of Yakura is disclosed as determining a physical measured quantity; "Yakura fails to disclose that the **coil** is proportional to the extent of the lateral undercut"; "Blayo teaches an etched lateral undercut"; and "it would have been obvious to one of ordinary skill in the art to incorporate the etched lateral undercut of Blayo in the Yakura semiconductor device." (Emphasis added)

It is respectfully submitted that the above-noted assertions by the Office are inadequate to properly support an obviousness rejection for at least the following reasons. First, the assertion by the Office that the "**coil**" is proportional to the extent of the undercut misconstrues the recited limitations of claim 23 since it is "a **physical measured quantity** that is proportional to the extent of the at least locally etched lateral undercut," and not a coil. Second, it is unclear how the assertion by the Office that "Blayo teaches an etched lateral undercut" addresses the purported deficiency of Yakura. In particular, it is unclear how the alleged disclosure of an etched lateral undercut of Blayo addresses the proportions of a coil or how such coil proportions would determine the extent of an etched lateral undercut, local or otherwise. Moreover, although the Final Office Action further asserts that "Blayo discloses a device that measures a physical quantity," and that "independent claims 23 and 31 does [sic] not preclude the measurement of temperature as described by Yakura," it is unclear how the disclosed measurement of a phase and amplitude change of a reflected beam of polarized light, as discussed in Blayo, provides support that a measured temperature change may be used to determine an extent of an etched lateral undercut of any structured surface layer, let alone an extent of a *locally* etched lateral undercut of a structured surface layer on which the closed loop 44 of Yakura is arranged, and not of a remotely-located structured surface layer associated with a separate batch wafer which has no coil arranged on it. Indeed, neither Yakura nor Blayo discloses or suggests that a temperature measurement may be used for any such purposes. Finally, for reasons stated in the Applicants' previous Response of September 4, 2003, the assertion that it would be obvious to incorporate the etched lateral undercut of Blayo in the Yakura semiconductor device "because processing methods to generate sub-

micron features typically employ plasma etching" is mere conclusory hindsight, reconstruction and speculation, which does not constitute proper evidence that will support a proper obviousness finding.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As indicated above, the combination of Yakura and Blayo fails to disclose all of the limitations of claim 23, in particular, at least one passive electronic component arranged on a structured surface layer on a sacrificial layer and in the shape of a coil, which is configured to determine a physical measured quantity that is proportional to an extent of an at least locally etched lateral undercut of the structured surface layer. Accordingly, even if it were proper to combine the Yakura and Blayo references as suggested (which is not conceded), it is respectfully submitted that such combination does not render claim 23 unpatentable.

It is also respectfully submitted that the Office has not demonstrated (or even addressed) a reasonable expectation of success that the Yakura and Blayo references may be combined to yield an equivalent device as recited in claim 23. In particular, it is unclear how the closed loop or spiral segment of Yakura that measures temperature could be successfully combined with a device that measures phase and amplitude changes of polarized light, as disclosed in Blayo. Indeed, it is unclear how such devices could be successfully combined at all, without rendering the modified prior art unsatisfactory for its intended purpose, or without changing the principle of operation of the prior art being modified. (See M.P.E.P. § 2143.01). Accordingly, it is respectfully submitted that claim 23 is not rendered unpatentable for these further reasons.

Moreover, with respect to the Final Office Action's assertion that "it would have been obvious to one of ordinary skill in the art to incorporate the etched later undercut of Blayo in

the Yakura semiconductor device," the case law and M.P.E.P. § 2143.01 make clear that a conclusory statement asserting that combining or modifying the applied references would have been within the ordinary skill of the art at the time the claimed invention was made does not establish a prima facie case of obviousness without further objective supporting reasons. Indeed, merely stating that "methods to generate sub-micron features typically employ plasma etching," or that "[b]ecause Applicants broadly and vaguely claims [sic] a monitoring device and fails to disclose a specific device, Blayo meets the teaching or motivation of the claim invention," as asserted by the Final Office Action, are not proper objective supporting reasons. In this regard, the Final Office Action's asserted suggestion to combine the Yakura and Blayo references is plainly based on nothing more than hindsight reasoning and subjective speculation.

Accordingly, it is respectfully submitted that there is no objective evidence that the references relied upon, whether taken individually or in combination, would provide the features and benefits of claim 23. It is therefore respectfully submitted that claim 23 is allowable for at least these reasons.

As for claims 24 to 37, which ultimately depend from claim 23 and therefore include all of the limitations of claim 23, it is respectfully submitted that claims 24 to 37 are allowable for at least the same reasons that claim 23 is allowable. Applicants therefore respectfully request that the rejection of claims 23 to 37 be withdrawn.

Applicants also note that the Final Office Action does not address the limitations of claims 31, 32, and 34. Accordingly, it is respectfully submitted that the rejection of claims 31, 32, and 34 be withdrawn for these further reasons.

As regards the Final Office Action's assertion that "there is no way to enforce the claimed invention since the invention is directed to product claims with process limitations and intended use features," Applicants respectfully disagree and submit that the Office's own procedures specifically provide that intended use recitations and other types of functional language cannot be disregarded. (See M.P.E.P. § 2111.02). However, to facilitate matters, claim 23 has been amended to recite that the at least one passive electronic component is configured to determine a physical measured quantity that is proportional to the extent of the at least locally etched lateral undercut of the structured surface layer on the sacrificial layer.

IV. The rejection under 35 U.S.C. § 103(a) with respect to Claims 38-42 should be withdrawn

Claims 38 to 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blayo in view of Yakura and further in view of Curran.

It is respectfully submitted that even if it were proper to combine the references as suggested (which is not conceded), the Curran reference does not cure the deficiencies of the Yakura and Blayo references (as explained above) with respect to claim 23, from which claims 38 to 42 ultimately depend. Indeed, the Office Action does not allege that it does. Accordingly, it is respectfully submitted that dependent claims 38 to 42 are allowable at least for the same reasons that claim 23 is allowable. Withdrawal of the rejection of claims 38 to 42 is therefore respectfully requested.

Conclusion

In light of the foregoing, Applicants assert that the present invention is new, non-obvious, and useful. Furthermore, all issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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